



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,945	10/05/2005	Manfred Schorghuber	SCHORGHUBER ET AL 1 PCT	3616
25880	7590	07/07/2010	EXAMINER	
COLLARD & ROE, P.C. 1077 NORTHERN BOULEVARD ROSLYN, NY 11576			NGUYEN, HUNG D	
			ART UNIT	PAPER NUMBER
			3742	
			MAIL DATE	DELIVERY MODE
			07/07/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/551,945

Applicant(s)

SCHORGHUBER ET AL.

Examiner

HUNG NGUYEN

Art Unit

3742

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11-15 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-15 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Paper No(s)/Mail Date _____
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-5, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al. (US 3,901,425) (previously cited) in view of Jeannette (US Pat. 3,384,778) (newly cited), Ueyama et al. (US Pat 4,102,483) and Bryce et al. (US Pat 4,187,411) (both previously cited).**
3. Regarding claims 1 and 2, Taylor et al. discloses a buffer device for a welding wire 12 (Fig. 1), wherein a wire buffer storage 16 (Fig. 1) is arranged between a wire feeder 14 (Fig. 1) provided on the welding apparatus (Fig. 1), and a further wire feeder 18 (Fig. 1) arranged within the welding torch 20 (Fig. 1) and the welding wire 12 (Fig. 1) is conducted between the two wire feeders 14 and 18 (Fig. 1) within the wire core 98 (Fig. 2), where in the wire buffer storage 16 (Fig. 1) is designed in a manner that the wire core 98 (Fig. 2) is fastened on one end in the region of the welding apparatus (Fig. 3, Col. 6 Lines 38-47), wherein the wire core 98 (Fig. 2) together with the welding wire 12 (Fig. 1), at least over a partial region, is arranged to be freely movable within a wire guide hose 96 (Fig 2) having a substantially larger cross section of the wire core 98 (Fig 2), and wherein the storage volume of the wire buffer storage 16 (Fig. 1) is defined by the cross section and the length of the substantially larger wire guide hose 96 (Fig. 2).

Taylor et al. does not disclose the wire core with its other end being freely movable; a wire guide hose extending in a spiral shape manner; and wherein means for detecting the filling level or quantity of welding wire of the wire buffer storage are arranged, said detection means detecting the longitudinal movement of the wire core and, in particular, the free end of the wire core. Jeannette discloses the wire core 34 (Fig. 1) with its other end freely movable. Ueyama et al. discloses a wire guide hose will have less contact area, less friction resistance and less wire guide load if it extends in a spiral manner in the wire hose (Fig. 18; Col. 1, Lines 20-30; Col. 4, line 22-35). Bryce et al. disclose a module 12 (Fig. 1) to monitor the stick-out distance 11 (Fig.1) of the welding wire 2 (Fig.1) beyond the tip 10 (Fig. 1) of the welding torch 1 (Fig.1, Col. 6 Lines 6-9). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Taylor et al., the wire core with its other end freely movable, as taught by Jeannette, for the purpose of forwarding and retracting the welding wire; to extend the wire hose in a spiral-shaped manner within the hose package, as taught by Ueyama et al., for the purpose of providing less contact area, less friction resistance and less wire guide load; and wherein means for detecting the filling level or quantity of welding wire of the wire buffer storage are arranged, said detection means detecting the longitudinal movement of the wire core and, in particular, the free end of the wire core, as taught by Bryce et al., for the purpose of determining how much welding wire is left.

4. Regarding claim 3, Taylor et al. discloses substantially all features of the claimed invention as set forth above except for the inner diameter of the wire guide hose is at least 1.5 times larger than an outer diameter of the wire core. Taylor et al. shows the

wire guide hose 96 (Fig. 2) is larger than the wire core 98 (Fig. 2). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Taylor et al to modify the inner diameter of the wire guide hose is at least 1.5 times larger than an outer diameter of the wire core for the purpose of allowing sufficient space in the hose for the wire to freely move.

5. Regarding claim 4, Taylor et al. further discloses the wire guide hose 96 (Fig. 2) is arranged with in a hose package 16 (Fig. 1).
6. Regarding claim 5, Taylor et al. further discloses the wire guide hose 96 (Fig. 2) extends with in a hose package 16 (Fig. 1).
7. Regarding claim 7, Bryce et al. discloses a wire guide hose 4 (Fig. 1) is arranged outside a hose package 9 (Fig.1).
8. Regarding claim 15, Taylor et al. discloses a welding plant including a welding apparatus (Fig 1), a hose package 16 (Fig. 1) and a welding torch 20 (Fig. 1), wherein the hose package 16 (Fig. 1) connects the welding torch 20 (Fig. 1) with the welding apparatus (Fig. 1), and a device designed as a wire buffer storage 16 (Fig. 1) and arranged between two wire feeders 14 and 18 (Fig 1), wherein said wire buffer storage is 16 (Fig. 1) formed in the hose package 16 (Fig. 1); where in the wire buffer storage 16 (Fig. 1) is designed in a manner that the wire core 98 (Fig. 2) is fixed on one end in the region of the welding apparatus (Fig. 3, Col. 6 Lines 38-47), wherein the wire core 98 (Fig. 2) together with the welding wire 12 (Fig. 1), at least over a partial region, is arranged to be freely movable within a wire guide hose 96 (Fig 2) having a substantially larger cross section of the wire core 98 (Fig 2), and wherein the storage volume of the

wire buffer storage 16 (Fig. 1) is defined by the cross section and the length of the substantially larger wire guide hose 96 (Fig. 2). Taylor et al. does not disclose the wire core with its other end being freely movable; a wire guide hose extending in a spiral shape manner; and wherein means for detecting the filling level or quantity of welding wire of the wire buffer storage are arranged, said detection means detecting the longitudinal movement of the wire core and, in particular, the free end of the wire core. Jeannette discloses the wire core 34 (Fig. 1) with its other end freely movable. Ueyama et al. discloses a wire guide hose extending in a spiral shape manner (Fig. 18; Col. 1, Lines 20-30; Col. 4, line 22-35). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Taylor et al., the wire core with its other end freely movable, as taught by Jeannette, for the purpose of forwarding and retracting the welding wire; to extend the wire hose in a spiral-shaped manner within the hose package, as taught by Ueyama et al., for the purpose of providing less contact area, less friction resistance and less wire guide load; and wherein means for detecting the filling level or quantity of welding wire of the wire buffer storage are arranged, said detection means detecting the longitudinal movement of the wire core and, in particular, the free end of the wire core, as taught by Bryce et al., for the purpose of determining how much welding wire is left.

9. Regarding claim 17, Taylor et al. further discloses a welding plant including a welding apparatus (Fig 1), a hose package 16 (Fig. 1) and a welding torch 20 (Fig. 1), wherein the hose package 16 (Fig. 1) connects the welding torch 20 (Fig. 1) with the welding apparatus (Fig. 1), and a device designed as a wire buffer storage 16 (Fig. 1)

and arranged between two wire feeders 14 and 18 (Fig 1), wherein said wire buffer storage 16 (Fig. 1) is formed in the hose package 16 (Fig. 1).

10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al. (US 3,901,425) in view of Jeannette (US Pat. 3,384,778), Ueyama et al. (US Pat 4,102,483), Bryce et al. (US Pat 4,187,411) and further view of Tomiyasu et al. (US Pub. 2005/0150883) (previously cited).

11. Regarding claim 6, Taylor/ Jeannette/Ueyama/ Bryce discloses substantially all features of the claimed invention as set forth above including from Taylor, lines conduit (Col. 4 Lines 22-29) are arranged within the hose package and from Ueyama, a spirally curved welding wire in a wire guide bore of a conduit cable (Fig. 18, Col. 2 Lines 32-34) **except** the lines arranged within the hose package in additional to the wire guide hose and the lines being arranged within the spirally extending wire guide hose. Tomiyasu et al. discloses an arc welding cable where the conductors 5 (Fig. 1) are disposed in the wire hose. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify in Taylor/ Jeannette/Ueyama/ Bryce, the lines arranged within the hose package, as taught by Tomiyasu, for the purpose of having an additional conductors dispose in the hose package thereby easier to handle.

12. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al. (US 3,901,425) in view of Jeannette (US Pat. 3,384,778), Ueyama et al. (US Pat 4,102,483), Bryce et al. (US Pat 4,187,411) and further view of Parmelee et al. (US Pat. 4,731,518) (previously cited).

13. Regarding claim 8, Taylor/ Jeannette/Ueyama/ Bryce disclose substantially all features of the claimed invention as set forth above **except** the wire guide hose arranged around the hose package. Parmelee et al. discloses a welding cable C (Fig. 1) is arranged around the power source PC (Fig. 1). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify in Taylor/ Jeannette/Ueyama/ Bryce, the wire guide hose is arranged around the hose package, as taught by Parmelee, for the purpose of providing a simple construction that is economical to manufacture and easy to weld with (Col. 2 Lines 50-53).

14. Regarding claim 9, Taylor/ Jeannette/Ueyama/ Bryce disclose substantially all features of the claimed invention as set forth above except for the wire guide hose arranged to helically extend about a carrier material independently of the hose package. Parmelee et al. discloses the power source PC (Fig. 1) is arranged helically extend about the welding cable C (carrier material, Fig. 1) independently. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify in Taylor/ Jeannette/Ueyama/ Bryce, the wire guide hose arranged to extend about a carrier material independently of the hose package, as taught by Parmelee, for the purpose of providing a simple construction that is economical to manufacture and easy to weld with (Col. 2 Lines 50-53).

15. **Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al. (US 3,901,425) in view of Jeannette (US Pat. 3,384,778), Ueyama et al. (US Pat 4,102,483), Bryce et al. (US Pat 4,187,411) and further view of Strybel (US Pat 4,458,719) (previously cited).**

16. Regarding claim 11, Taylor/ Jeannette/Ueyama/ Bryce disclose substantially all features of the claimed invention as set forth above except for the wire buffer storage is comprised of a structural unit comprising the wire guide hose, on which a terminal element, particularly a quick lock is arranged on either end, and the wire core. Strybel discloses a quick coupler service fitting for quick connection between a first coupler adapter to a service hose (Abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify in Taylor/Jeannette/Ueyama/Bryce, to replace the screws 92 (Fig. 3) and 154 (Fig. 5) with the quick coupler, as taught by Strybel, for the purpose of allowing faster replacement or interchanging of the wire core.

17. Regarding claim 12, Taylor/ Jeannette/Ueyama/ Bryce disclose substantially all features of the claimed invention as set forth above except for the wire buffer storage is exchangeable without requiring any tool. Strybel discloses a quick coupler service fitting for quick connection between a first coupler adapter to a service hose (Abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify in Taylor/ Jeannette/Ueyama/ Bryce, to replace the screws 92 (Fig. 3) and 154 (Fig. 5) by the quick coupler for changing the wire buffer storage without requiring any tools by pressing a finger manipulation portion 52 (Fig. 2), as taught by Strybel, for the purpose of easy removing or replacing of the wire buffer as needed.

18. **Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al. (US 3,901,425) in view of Jeannette (US Pat. 3,384,778), Ueyama et al.**

(US Pat 4,102,483), Bryce et al. (US Pat 4,187,411) and further view of Huismann et al. (US Pat. No. 7,165,707) (previously cited).

19. Regarding claim 13, Taylor/ Jeannette/Ueyama/ Bryce disclose substantially all features of the claimed invention as set forth above except for a guide element of the terminal element projects into a sensor for detecting the longitudinal movement of the wire core. Huismann et al. discloses a sensor for detecting the longitudinal movement of the wire core (Col. 6, Lines 54-62) to monitor the wire core movement. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify in Taylor/ Jeannette/Ueyama/ Bryce, a guide element of the terminal element projects into a sensor for detecting the longitudinal movement of the wire core, as taught by Huismann et al., for the purpose of providing a suitable sensor that can be used to control the wire feed motor with more precision.

20. **Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al. (US 3,901,425) in view of Jeannette (US Pat. 3,384,778), Ueyama et al. (US Pat 4,102,483), Bryce et al. (US Pat 4,187,411) and further view of Savard et al. (US Pat 2,964,612) (previously cited).**

21. Regarding claim 14, Taylor/ Jeannette/Ueyama/ Bryce disclose substantially all features of the claimed invention as set forth above **except** the wire guide hose is preformed in a spiral-shaped manner. Savard et al. discloses the electrodes made from two to three bare-surfaced wires twisted together in a spiral (Fig. 1- 4 and 8). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify in Taylor/ Jeannette/Ueyama/ Bryce, the wire hose is preformed in a

spiral-shaped manner, as taught by Savard et al., for the purpose of allowing faster continuous electrode feed than compared to a stick electrode (Col. 4 Lines 50-53).

22. Applicant's arguments, see page 11, filed 3/26/2010, with respect to claim 1 and 15 have been fully considered and are persuasive. The rejection of claim 1 and 15 has been withdrawn.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **HUNG NGUYEN** whose telephone number is (571)270-7828. The examiner can normally be reached on Monday-Friday, 9M-6PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on (571)272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HUNG NGUYEN/
Examiner, Art Unit 3742
6/30/2010

/TU B HOANG/
Supervisory Patent Examiner, Art Unit 3742